

REMARKS/ARGUMENTS

Favorable reconsideration of the present application is respectfully requested.

Claim 1 is directed to a solid polymer electrolyte fuel cell comprising a polymer electrolyte membrane, an anode and a cathode, wherein the cathode comprises a first gas diffusion layer joined to a second gas diffusion layer in a thickness direction of the cathode, and wherein the second gas diffusion layer has a different characteristic as compared to the first gas diffusion layer. Claim 6 similarly recites that a second gas diffusion layer in an electrode, which is joined to the first gas diffusion layer in a thickness direction of the electrode, has a different characteristic compared to the first gas diffusion layer.

Claims 1 and 6, together with several of the dependent claims thereof, were rejected under 35 U.S.C. § 102 as being anticipated by U.S. patent publication 2001/044373 (Lott et al.). The Examiner there specifically referred to Figure 6 and paragraphs 22-23 of the reference, wherein the first and second gas diffusion layers were respectively considered to be the layers 40 and 60 of the reference.

Applicant notes that Lott et al. represents a publication of U.S. patent application 09/792,085 which was filed on February 23, 2001, which is prior to the November 23, 2001 filing date of the present application, but which is subsequent to the November 22, 2000 convention priority date of the present application under 35 U.S.C. § 119. Applicant further notes that, while Lott et al. is a continuation in part of U.S. patent application 09/577,407 filed on May 17, 2000, the '407 parent application does not provide support for the disclosure relied upon by the Examiner. Specifically, the '407 parent application matured into U.S. patent 6,468,682. An examination of the description of the '682 patent reveals that it lacks any disclosure corresponding to Figure 6, or to the diffusion layers 40 and 60 shown therein. Rather, the subject matter relied upon by the Examiner was only introduced as of the

February 23, 2001 filing date of the '085 application, and so the relevant portions of Lott et al. are only prior art as of the filing date of the '085 application.

Applicant is at this time submitting a certified English translation of the convention priority application 2000-355722, and submits that it provides support for the rejected claims. Applicant therefore respectfully submits that the convention priority date of November 22, 2000 has been perfected, and that Lott et al. is no longer prior art with respect to the present application. The rejection under 35 U.S.C. § 102 is therefore believed to be moot. The rejection of Claim 4 under 35 U.S.C. § 103 as being obvious over Lott et al. is similarly believed to be moot.

Claims 2 and 7 were rejected under 35 U.S.C. § 103 as being obvious over Lott et al. in view of U.S. patent publication 2003/0068544 (Cisar et al.). It is noted, however, that this rejection has also been rendered moot by the submission of the certified English translation of the convention priority document, both because the relevant disclosure of Lott et al. is only prior art as of its February 23, 2001 filing date, and because the filing date of Cisar et al. was October 10, 2001.

Claim 10 is directed to a method for producing an electrode of a solid polymer electrolyte fuel cell having first and second gas diffusion layers which are joined by thermal pressing. According to a feature of the invention, the first gas diffusion layer 10 is pressed to increase its density for controlling the gas permeability thereof (see paragraph [0041]). The pressed first gas diffusion layer 10 is then joined to a second gas diffusion layer (see paragraph [0043]). Thus, the electrolyte is composed of joined gas diffusion layers having different gas diffusion performances. This inhibits the drying out of the electrode and promotes the uniform distribution of gases to the whole surface of the catalyst layer (see paragraph [0075]). Claim 10 has therefore been amended to clarify that the first gas diffusion layer is formed by forming a first gas diffusion layer by pressing one of second gas diffusion

layers to increase a density of the second gas diffusion layer, and thermally pressing to join the first gas diffusion layer and *the second gas diffusion layer which has not been pressed to increase a density thereof.*

Claim 10 had been rejected under 35 U.S.C. § 102 as being anticipated by the U.S. Patent 5,996,057 (Koschany et al.). The Examiner there referred specifically to lines 20-40 of column 4 of the reference, which describes that several carbon fiber nonwoven fabrics are impregnated and sintered to form a gas diffusion electrode. The Examiner stated that “[t]hermally pressing multiple diffusion layers simultaneously includes the process of forming a first gas diffusion layer by pressing one of the second gas diffusion layers. ... With respect to the increase in density, thermal pressing inherently increases the density of the first diffusion layer.”

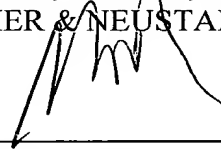
However, while it may be true that Koschany et al. discloses pressing identical gas diffusion layers sufficiently to increase the density thereof, the description in Koschany et al. is for thermally pressing all of the layers (“for obtaining good adhesion of the impregnated carbon fiber nonwoven fabrics to each other, the desired number of impregnated and sintered carbon fiber nonwoven fabrics can be subject to pressing”; column 4, lines 30-33). Thus, if this pressing step is sufficient to increase the density of one of the gas diffusion layers, it will be sufficient to increase the density of all of the gas diffusion layers. Accordingly, this pressing step of Koschany et al. cannot comprise the presently claimed step of “thermally pressing to join the first gas diffusion layer and the second gas diffusion layer *which has not been pressed to increase a density thereof.*” The amended Claim 10 is therefore believed to define over Koschany et al.

Application No. 09/990,378  
Reply to Office Action of February 26, 2004.

Applicant therefore believes that the present application is in a condition for allowance and respectfully solicits an early notice of allowability.

Respectfully submitted,

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